

TWO SPECIES OF THE "FILAGO GERMANICA" GROUP (COMPOSITAE-INULEAE) IN THE UNITED STATES

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In the past there has been considerable discrepancy regarding species-delimitation in the genus *Filago* especially as concerns the group centering around "Filago germanica" (a name which for nomenclatural reasons cannot be maintained and has to be replaced by *Filago vulgaris* Lam.—Wagenitz, 1965). Some authors have used the name "Filago germanica" in a collective sense, but our monographic studies have confirmed the view of those authors, who have distinguished several species in this complex (Wagenitz, 1965, 1969). These species differ by inconspicuous but very constant characters.

In North America "Filago germanica" has been known for a long time from the eastern part of the United States and has recently been reported also from Oregon and California. A closer inspection of these plants is necessary.

1. Eastern North America

Clayton seems to have been the first American botanist who collected a *Filago* of this group in eastern North America, in Virginia. This find was published by Gronovius (1739). Although the name used ("Gnaphalium minimum humile, Herba Impia dictum") may not be unequivocal, the fact is confirmed by a specimen from Virginia from the herbarium of Gronovius (in herb. Jacquin, Vienna). Later on the species is mentioned under the name of "Gnaphalium germanicum" or "Filago germanica" in most of the classical floras of this area (e.g. Pursh 1814, Barton 1818, Darlington 1837, Torrey 1843, Torrey & Gray 1843). Barton considered it to be a native species, but the opinion prevailed that it was introduced from Europe. This appears to be very probable, but as the spread of the plant apparently took place before the beginning of a floristic study of the continent no direct evidence is available. Uechtritz (1871: 190) seems to have been the first author who critically examined the material of "Filago germanica" from North America after it had been established that there is more than one species of this group in Central Europe. He concluded that the American plants belong to "Filago canescens Jord." (*F. germanica* s.str. of most later authors), now correctly called *F. vulgaris* Lam. This conclusion has

been fully confirmed by our studies. During the revision of material from numerous herbaria of Europe and several from the United States (GH, NY, POM, UC), 43 collections all belonging to *Filago vulgaris* Lam. have been seen from the following states: New York, New Jersey, Pennsylvania, Delaware, District of Columbia, Maryland, Virginia, West Virginia, North Carolina, South Carolina. According to Fernald (1950), the species is also known from Ohio and Georgia. It is remarkable that only 11 of these collections are dated in this century, the latest from 1947. This may be due either to a diminishing activity of floristic botany in the last decades or to a decrease of the species on account of more intensive cultivation as noted in Europe.

2. Western North America

The first record from this area was published by J.Th. Howell (1939) and referred to a plant collected by Mr. Lewis S. Rose in Roseburg, Douglas Co., Oregon. I have examined a fragment of this plant sent to me by the courtesy of Mr. Howell and can confirm that it is *F. vulgaris* Lam. This may have been a casual introduction from the Eastern states.

Of more interest is the material collected in California since 1935 by Tracy and Lennon (see the short notes of Howell, 1942 and 1973 and Munz, 1968). All three collections so far known have been studied by me and they belong to *Filago pyramidata* L. (syn.: *F. spathulata* C. Presl), a mainly Mediterranean plant extending into the southern parts of Central Europe and the Near East (Wagenitz, 1970). It is not surprising that the Mediterranean representative of this group is introduced (and perhaps locally naturalized) in California as the high percentage of species with this type of distribution in the California weed-flora is very well known. In fact another Mediterranean *Filago*-species (belonging to another section) has been naturalized for a long time: *F. gallica* L. The distinction of the two species of the "Filago germanica" group is not difficult especially if the capitula are studied under the binocular.

The main differences are:

	<i>Filago pyramidata</i>	<i>F. vulgaris</i>
Leaves	oblong-spathulate (broadest near apex)	lanceolate (broadest near middle)
Phyllaries of involucre	in 5 distinct rows, keeled on back	not in 5 distinct rows, rounded on back
Median phyllaries	with short straight point	with spreading mucro
Flowers in central part of involucre	5-6 hermaphrodite, few female flowers	2-3 hermaphrodite, numerous filiform female flowers
Number of capitula in cluster	20-30 (40)	8-16

It seems appropriate to cite in full the three collections of *Filago pyramidata* L. known from California:

Mendocino County: near Hopland (along highway ten miles south), dry hillside, 600 feet, 18.VIII.1935, *J. P. Tracy 14741* (JEPS)

Mendocino County: between Hopland and Cloverdale, locally naturalized along highway on dry hillsides, 600 feet, 6.VI.1938, *J. P. Tracy 15848* (DS, GH, JEPS, NY, UC)

Marin County: dry open hills above Kirby Cove, Marin Headlands State Park, just west of Golden Gate Bridge, 28.V. & 3.VII. 1971, *Elizabeth S. Lennon s.n.* (CAS)

Californian field-botanists should keep a close eye on this species, which may be expected to spread farther in the state. It is not a serious weed, but an interesting addition to the flora of California.

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